Past and recent extreme rainfall events in the Philippines

AUTHOR(S):

Villafuerte, Marcelino II Q.

Past and recent extreme rainfall events in the Philippines

Presented by: Marcelino Q. Villafuerte II

PhD Student, Tokyo Metropolitan University

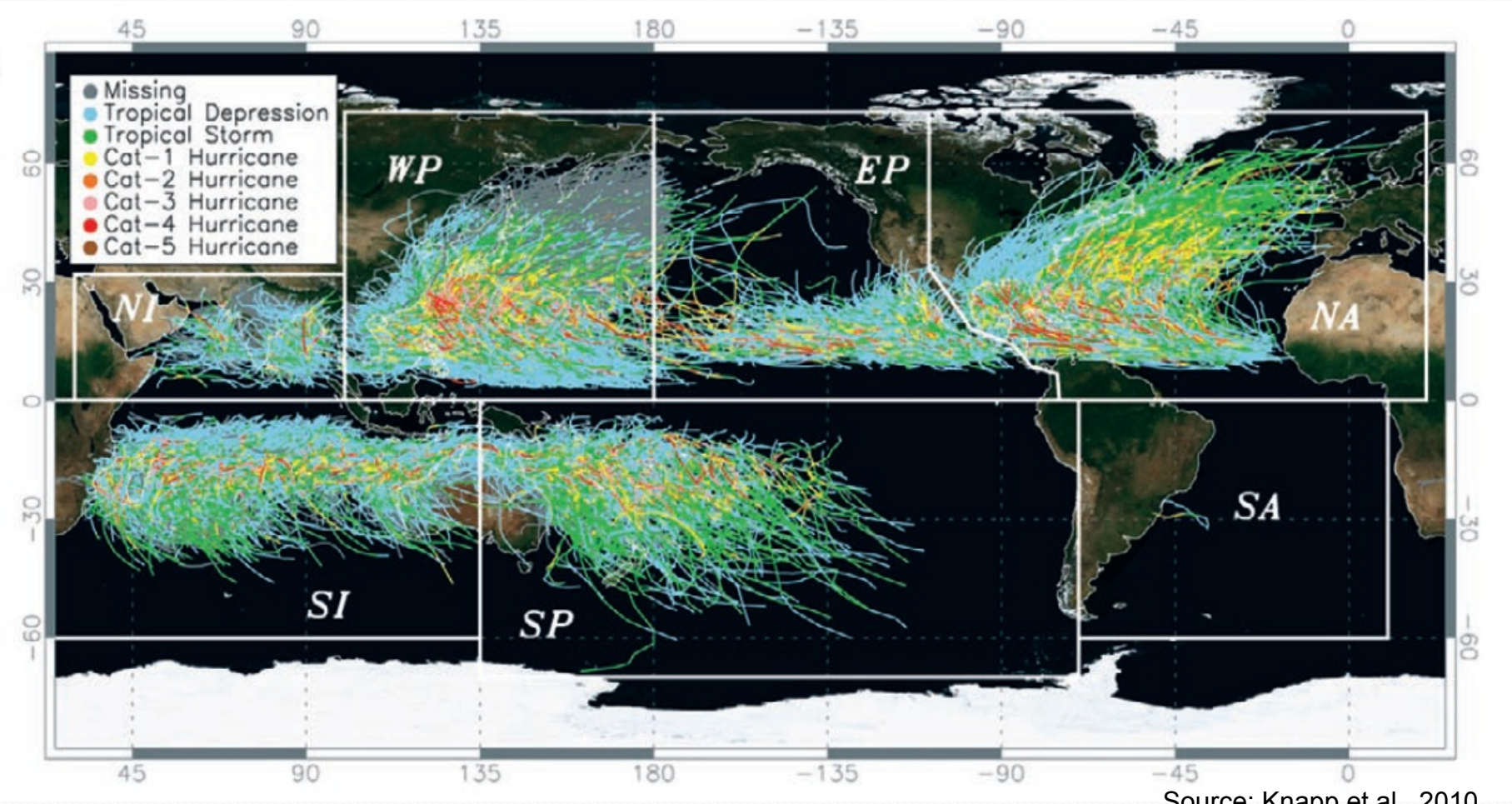
Supervisor: Prof. Jun Matsumoto

Location of the Philippines:

Source: Googlemaps

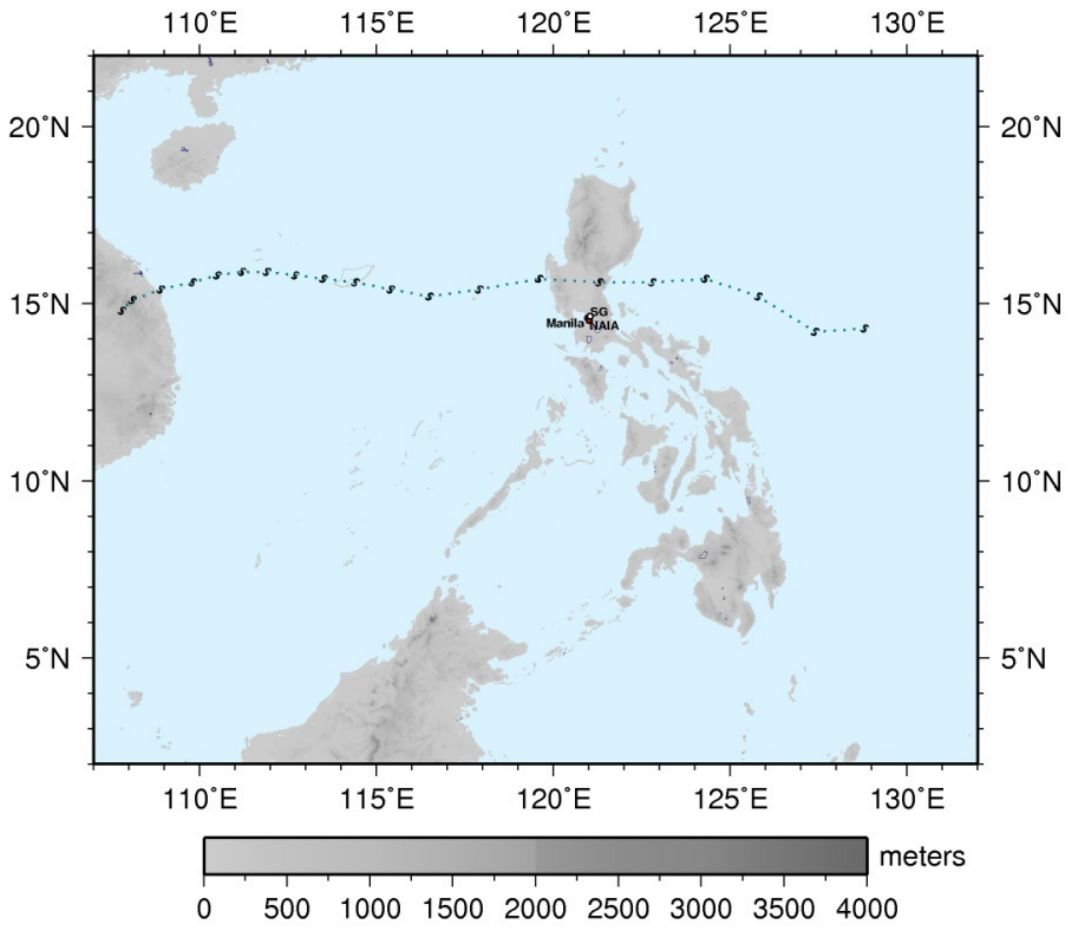
Main Islands of the Philippines:

Track of tropical cyclones from 1979-2007:



Source: Knapp et al., 2010

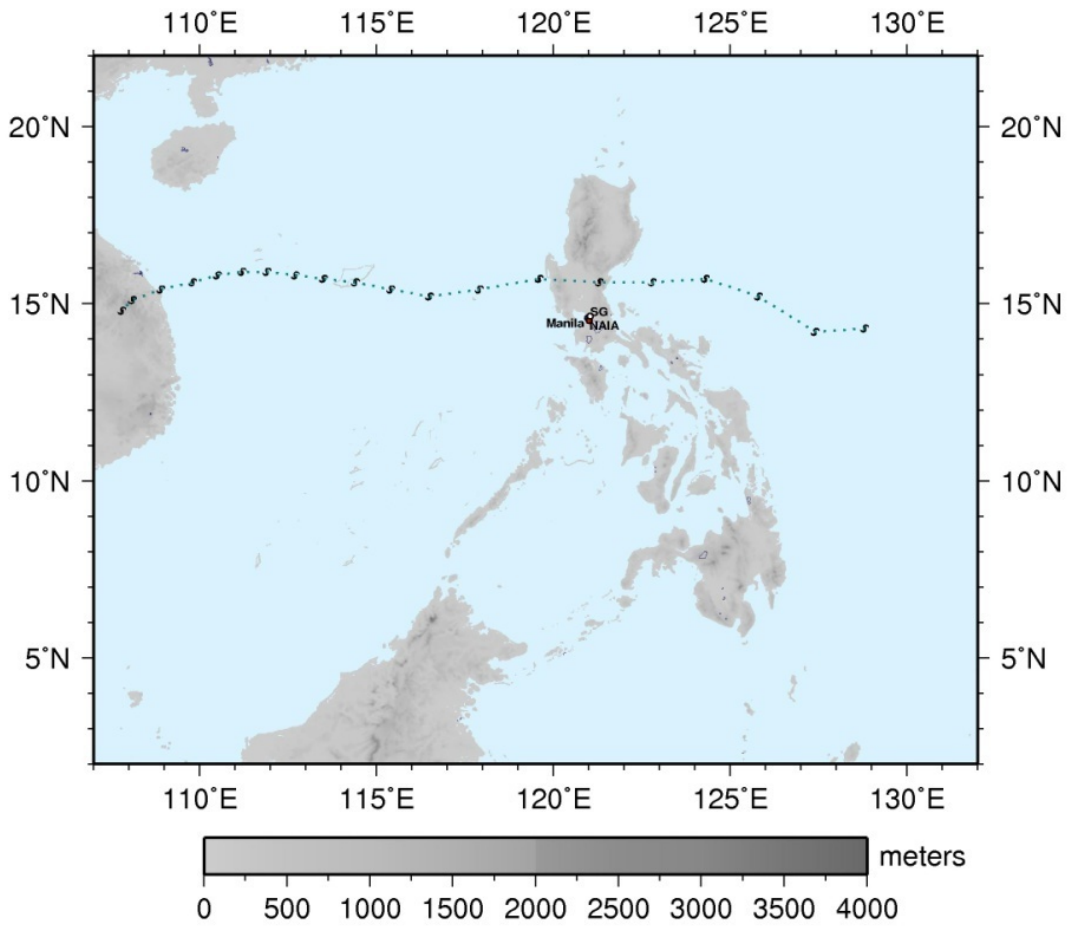
Typhoon “Ondoy” (Ketsana) 25-29Sep2009:



Source: JTWC best track from Unisys weather

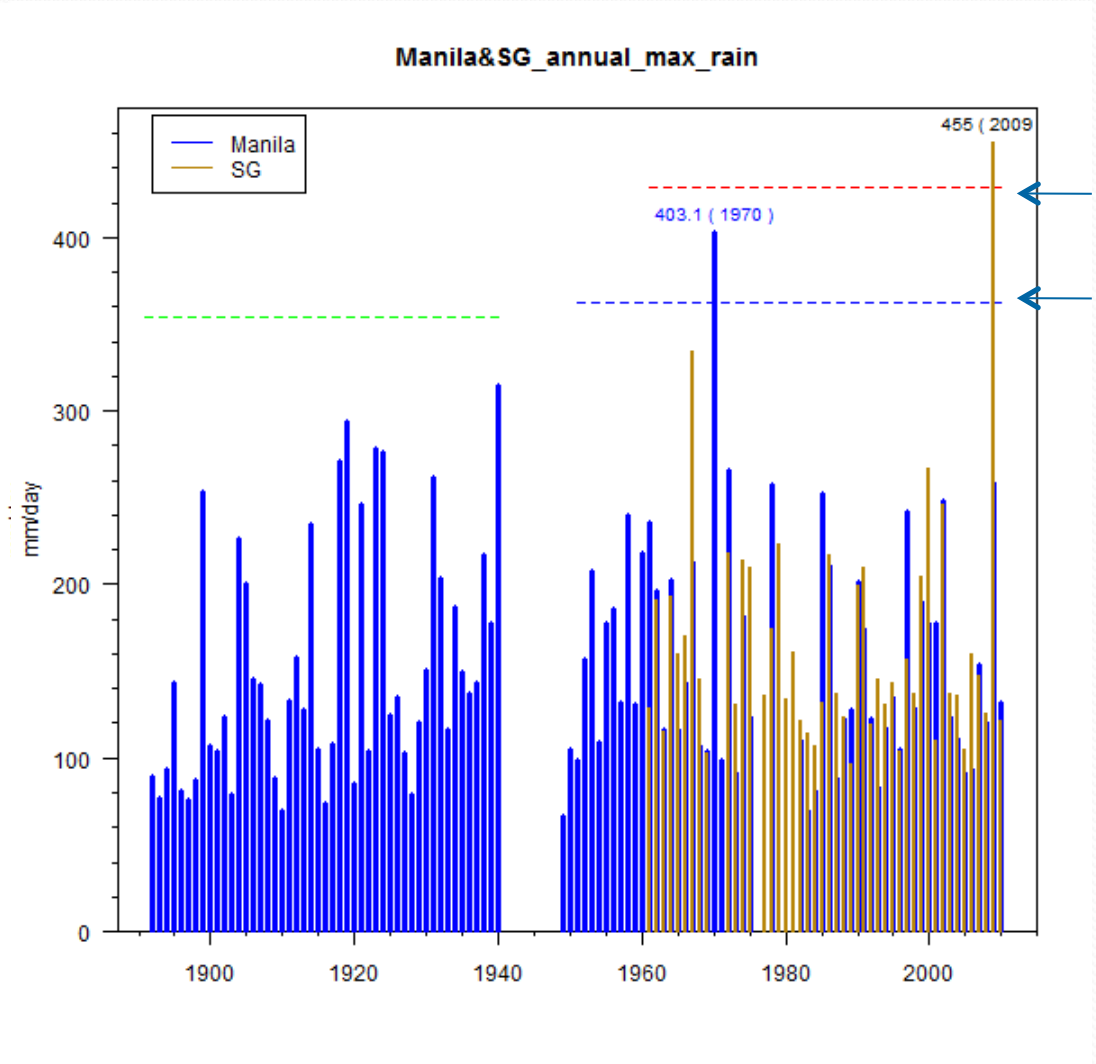
Typhoon “Ondoy” (Ketsana) 26Sep2009 Manila:

Typhoon “Ondoy” (Ketsana) 25-29Sep2009:



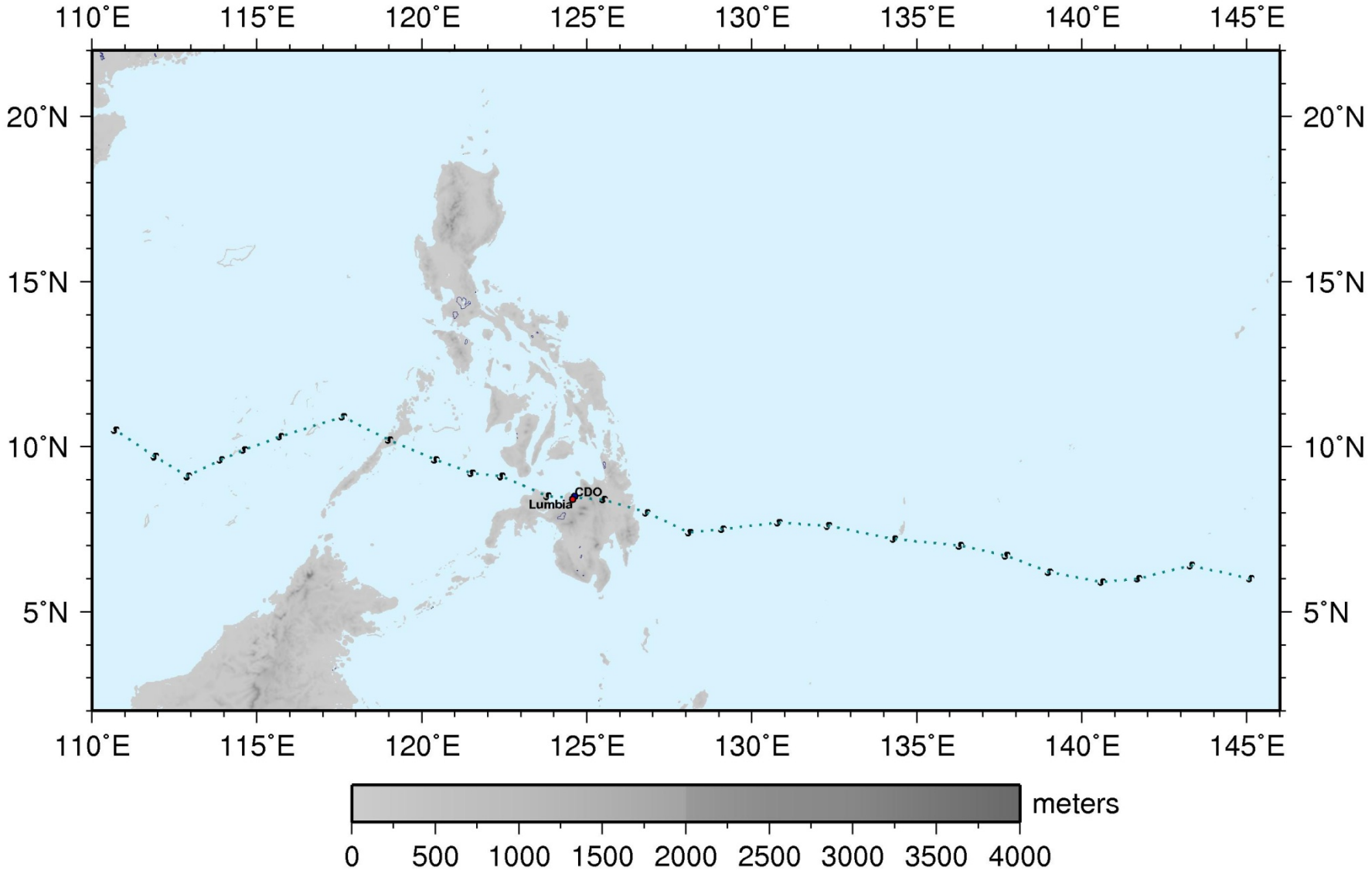
Source: JTWC best track from Unisys weather

Historical rainfall record in Manila:



Mean monthly accumulated Rainfall for September

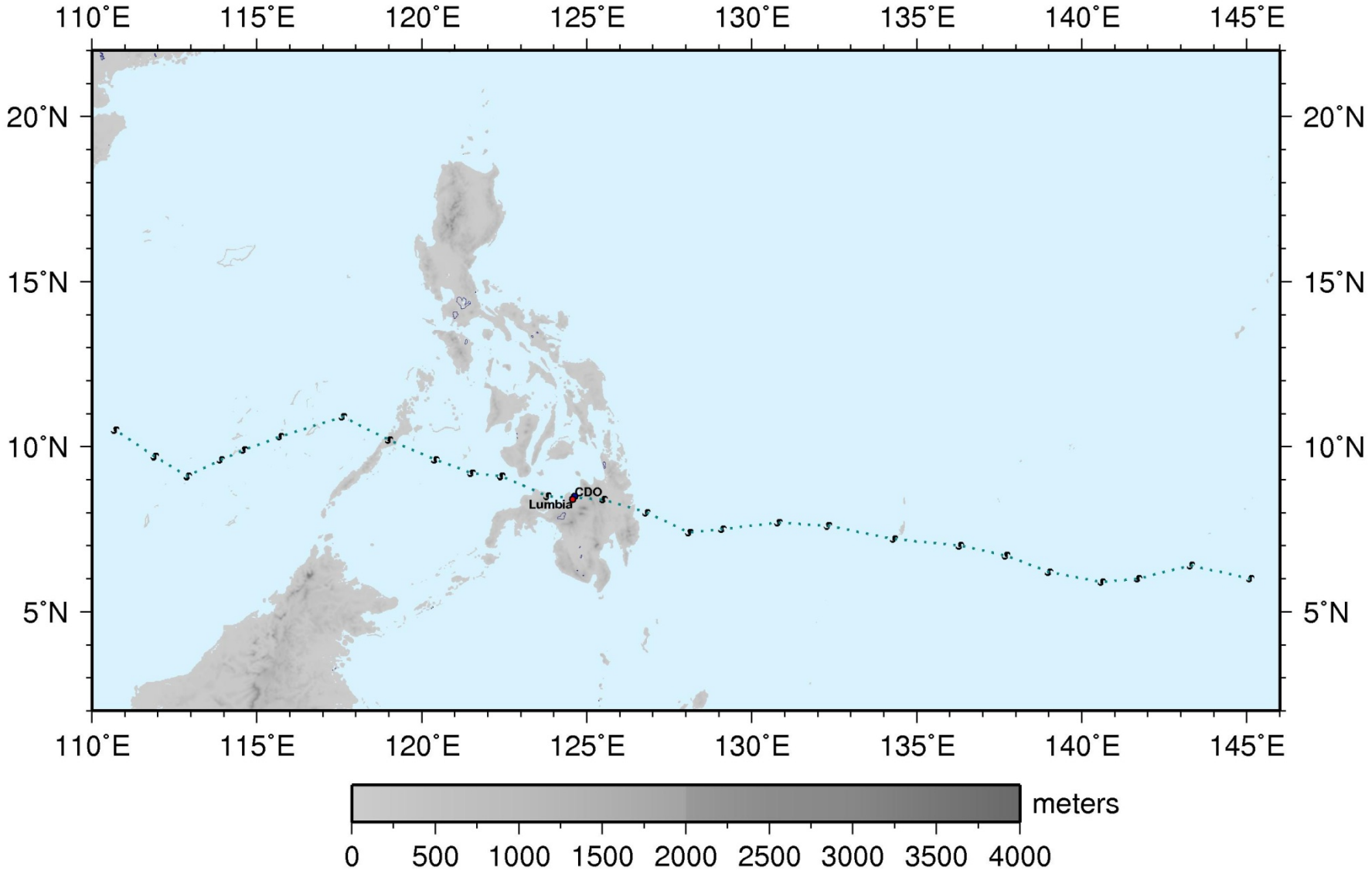
Tropical Storm “Sendong”(Washi) 13-19Dec 2011:



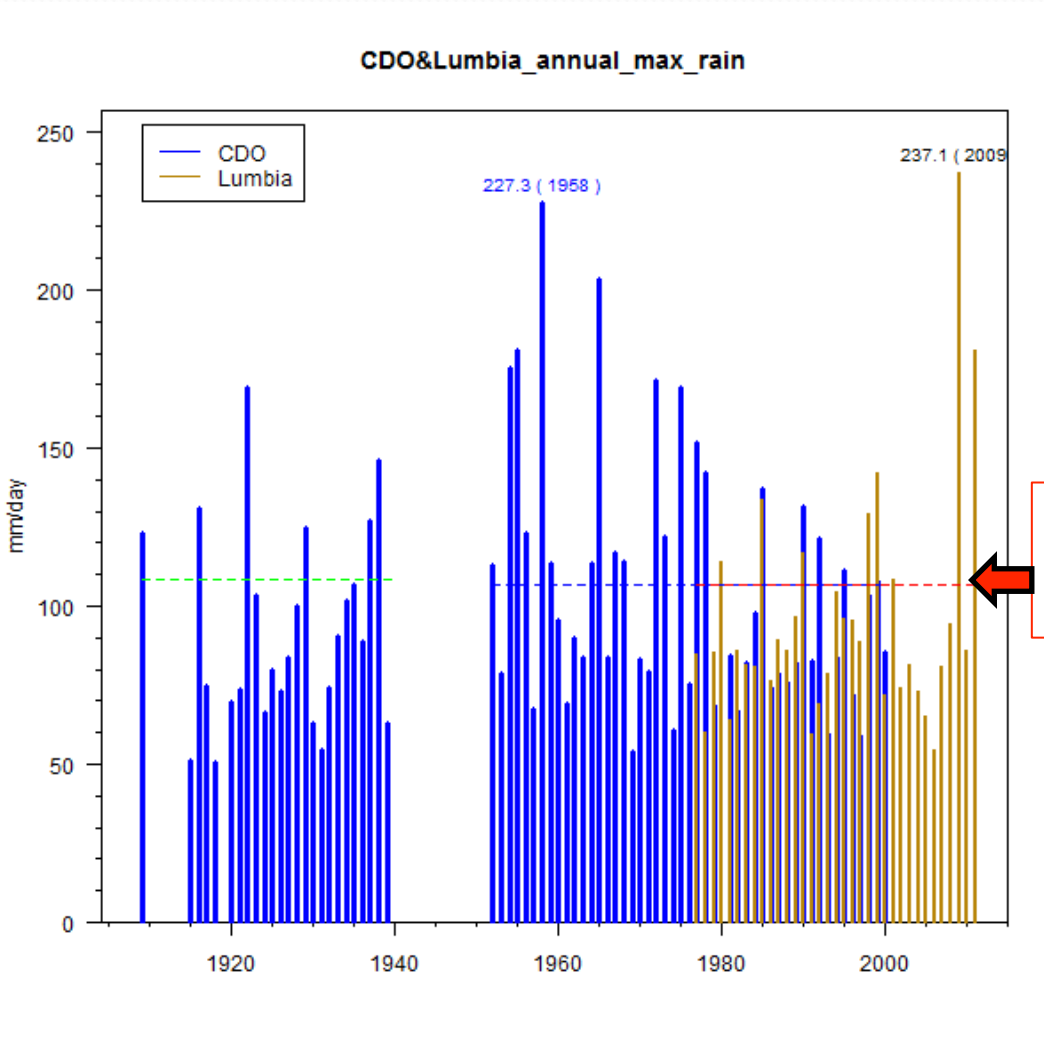
Areas affected by TS “Sendong”(Washi):

Areas affected by TS “Sendong”(Washi):

Tropical Storm “Sendong”(Washi) 13-19Dec 2011:

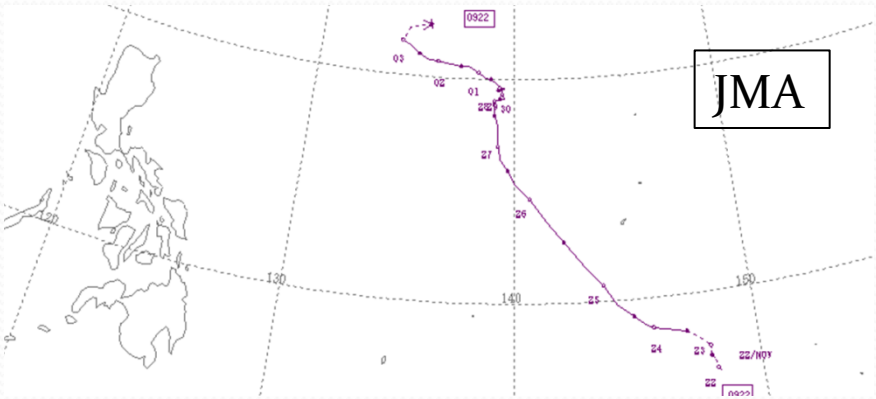


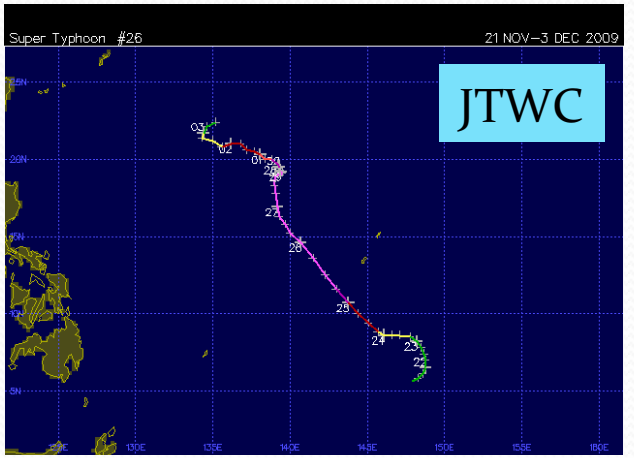
Annual maximum rainfall recorded in Cagayan de Oro and Lumbia:

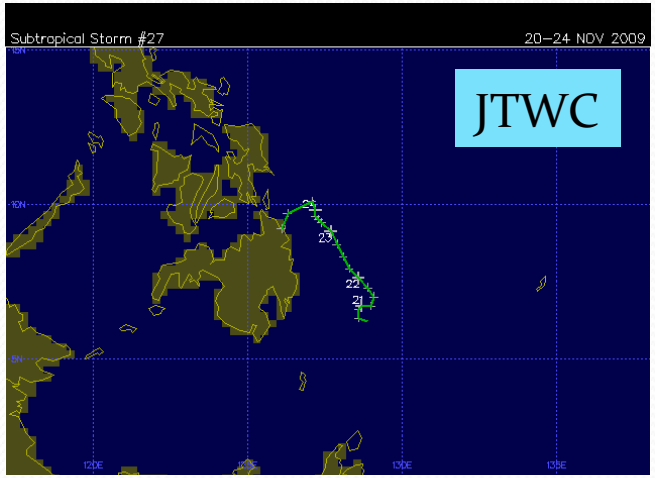


Mean monthly accumulated Rainfall for December

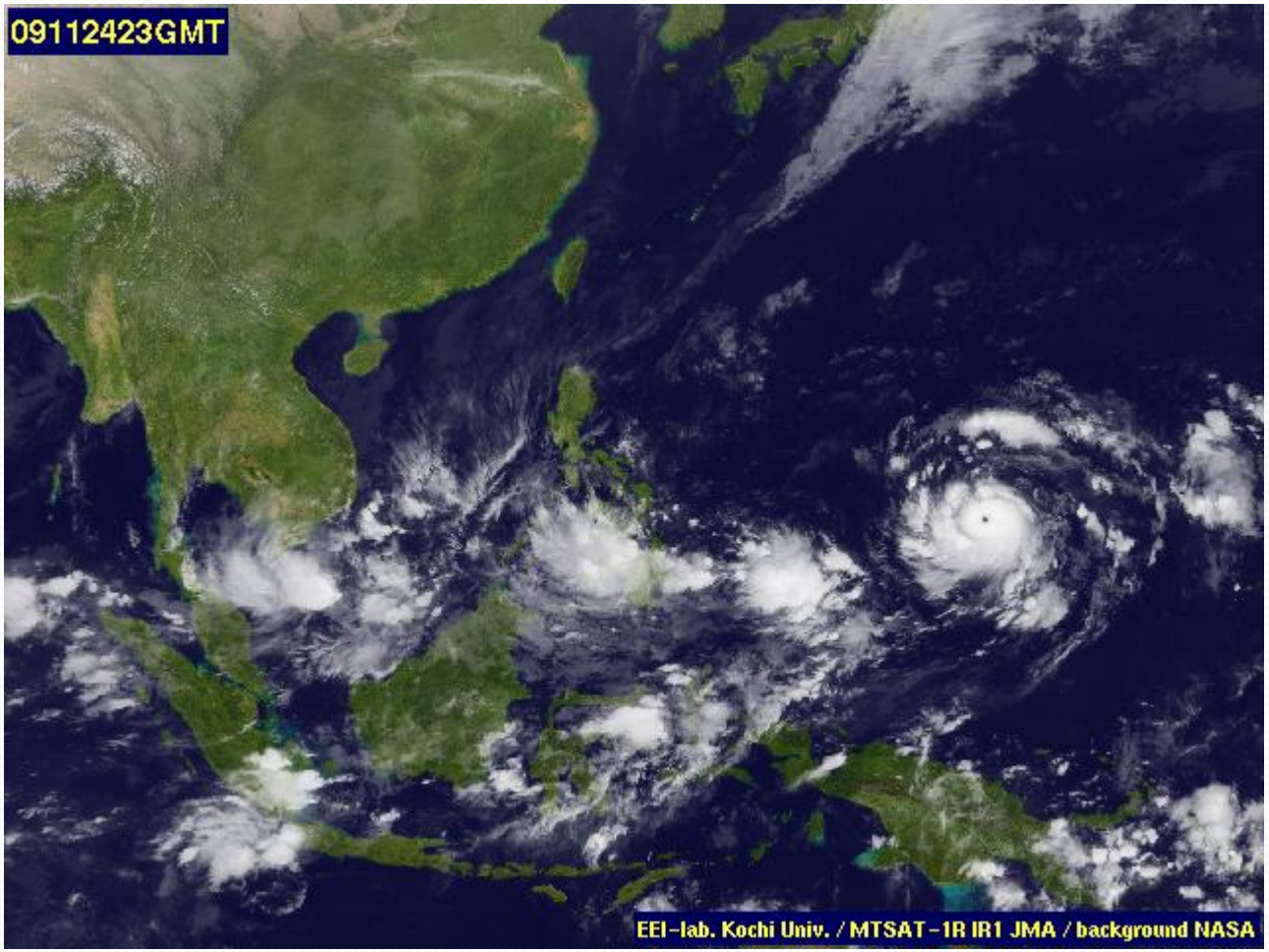
What caused that amount of rainfall in 24Nov2009 ?







Sources: JMA and Unisys Websites


09112423GMT
EEI-lab. Kochi Univ. / MTSAT-1R IR1 JMA / background NASA

Summary:

- Historical daily rainfall records revealed past occurrences of extreme rainfall events both in Manila and Cagayan de Oro which are comparable with the recent extreme events

- Although typhoons/tropical cyclones are usually associated with record-breaking rainfall amounts, it is still important to consider other factors causing them

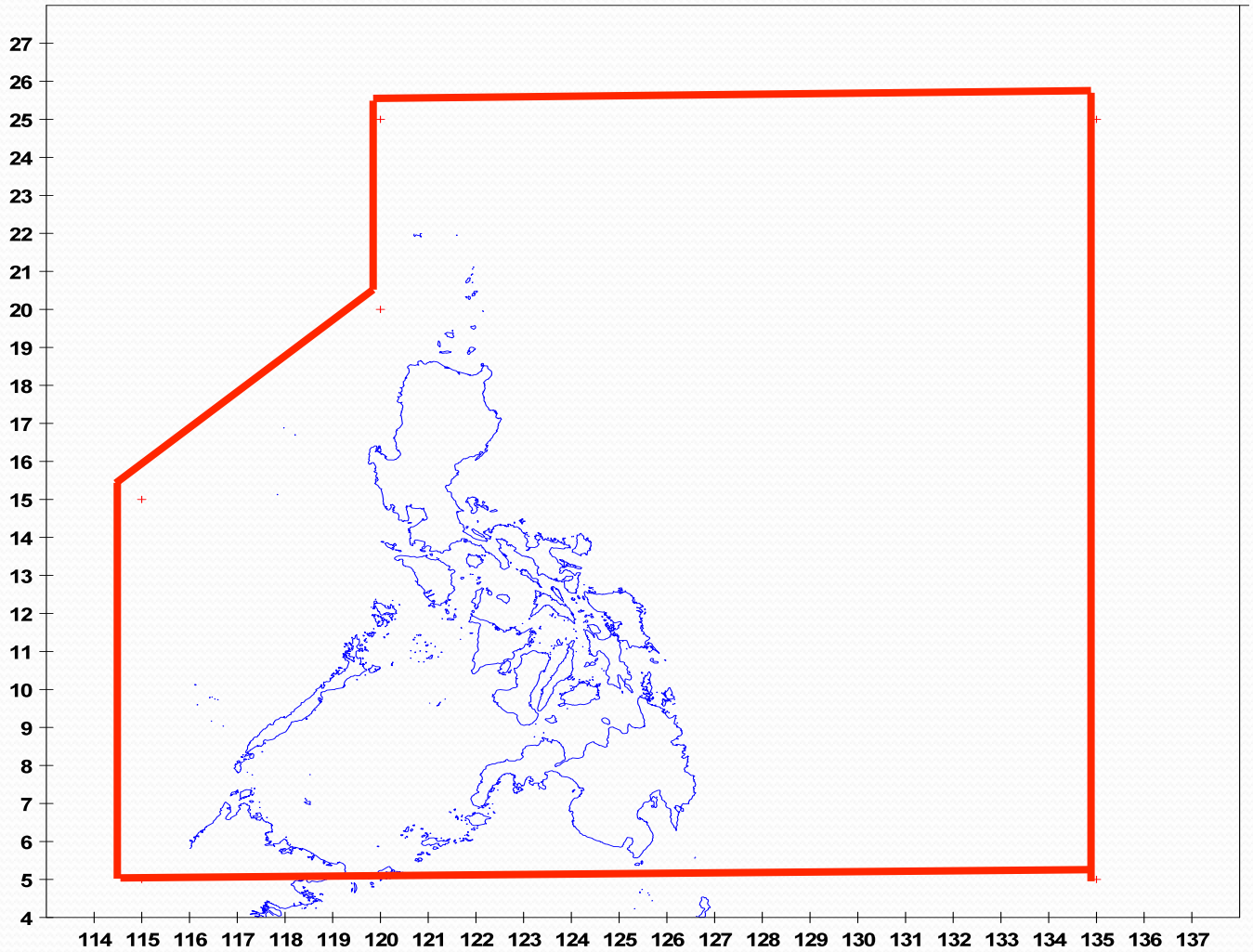
- Availability of satellite images are of great help in deciding for the exclusion/inclusion of an outlier in an observational data set

Summary:

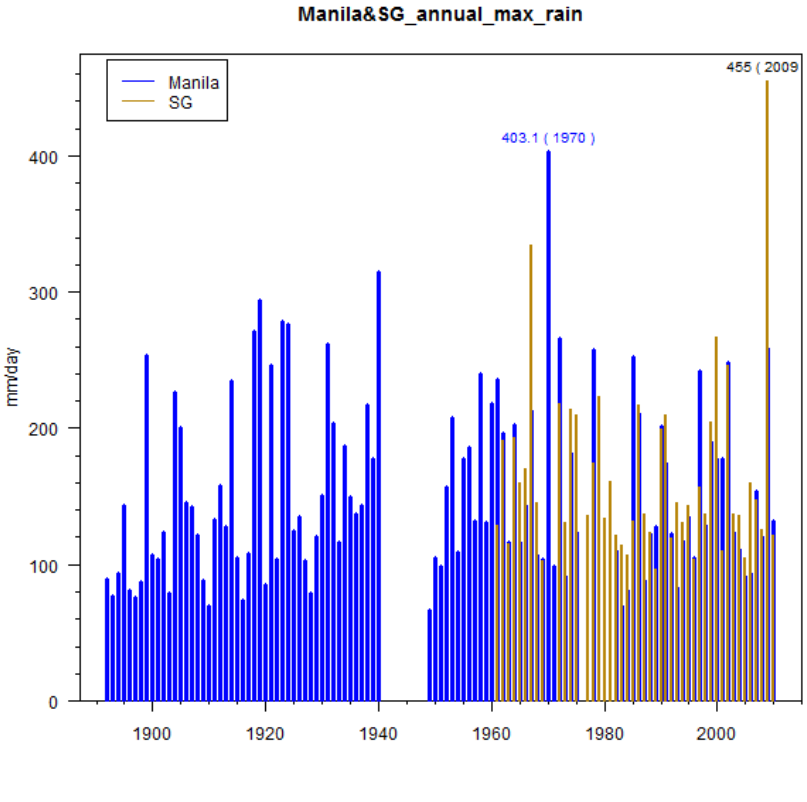
- Higher temporal resolution rainfall data (i.e. hourly) is needed for a more detailed analyses such as flood-causing extreme rainfall events

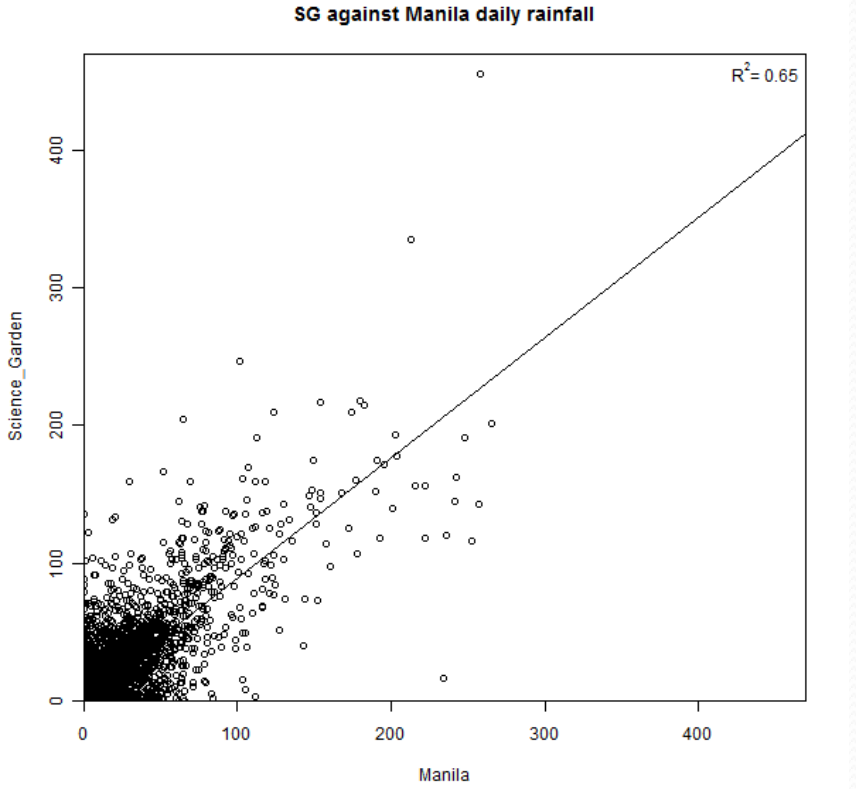
Thank You!

The Philippine Area of Responsibility (PAR):



Historical rainfall record in Manila:





Annual maximum rainfall recorded in Cagayan de Oro and Lumbia: